

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number

Q76741

Mail Stop AF
Commissioner for Patents
P.O. Box 1450 Alexandria, VA 22313-1450

Application Number

10/663,808

Filed

September 17, 2003

First Named Inventor

Denis PENNINCKX

Art Unit

2613

Examiner

Wai Lun Leung

WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal

The review is requested for the reasons(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

☒ I am an attorney or agent of record.

Registration number 60,658


Signature

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September 10, 2007

Date

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q76741

Denis PENNINCKX, et al.

Appln. No.: 10/663,808

Group Art Unit: 2613

Confirmation No.: 4036

Examiner: Wai Lun Leung

Filed: September 17, 2003

For: OPTICAL CROSS-CONNECT UNIT OF MULTIGRANULAR ARCHITECTURE

PRE-APPEAL BRIEF REQUEST FOR REVIEW

MAIL STOP AF - PATENTS

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

Pursuant to the Pre-Appeal Brief Conference Pilot Program, and further to the Examiner's Final Office Action dated March 8, 2007, Applicant files this Pre-Appeal Brief Request for Review. This Request is also accompanied by the filing of a Notice of Appeal.

Applicant turns now to the rejections at issue:

As of the final rejection, dated March 8, 2007, claims 1-4, 6-8 are rejected under 35 U.S.C. §103(a) allegedly being unpatentable over Yamada et al. (U.S. Pat. No. 7,058,303; hereinafter "Yamada") in view of Harada et al. (Hierarchical Optical Path Cross-Connect Systems for Large Scale WDM Networks; hereinafter "Harada"). Claims 5 and 9 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over Yamada in view of Harada, as applied to claim 4, and further in view of Wang et al. (U.S. Pub. No. 2003/0185565 A1). Claim 10 is rejected under 35 U.S.C. § 103 (a) as being unpatentable over Yamada in view of Harada, as

applied to claim 7, and further in view of Iannone et al. (U.S. Patent No. 6,792,207; hereinafter “Iannone”).

At issue is whether the combination of the references as proposed by the Examiner renders the claimed invention obvious. Applicant respectfully disagrees with these rejections because the cited references, taken alone or in combination, fail to disclose or suggest all of the claims limitations. Applicant respectfully submits that the claimed invention is patentable over the combination for the following reasons:

The claimed invention is directed to provide an optical cross-connect unit on multigranular architecture having at least one switching stage for switching wavelength and one switching stage for switching wavelength bands. These features are clearly recited in claim 1.

By contrast, Yamada relates to an optical cross-connecting device performing switching of wavelength multiplexed signals. Yamada discloses that wavelength multiplexed signals are switched by a first optical switch 2, and then only wavelength multiplexed signals necessary to be switched at small granularity are separated into M wavelength groups by demultiplexers 5. Each wavelength group, 6-1 to 6-M, is output to a second set of optical switches, 71- to 7-M, to be switched per wavelength group. As needed, the wavelength signals are output to demultiplexers so that the wavelength signals may be switched at progressively finer granularity, until the signals are switched at the individual wavelength level. *See* Yamada, col. 6, line 63 - col. 7, line 35; Figure 1.

Yamada also discloses another embodiment, that introduces a switching stage where the wavelength groups are divided into a number of wavelength groups of small granularity before

being input to the final demultiplexer and switch where the signals are divided and switched according to individual wavelength signals. *See* Yamada, col. 10, lines 18-55.

The Examiner correctly concedes that “Yamada does not disclose expressly wherein the wavelength groups in the first stage associates with a distinct wavelength bands, and wherein the first demultiplexer means for demultiplexing wavelength bands and having p groups of n outputs associated with n distinct wavelength bands, each output being connected to a distinct one of the input switch ports of the first matrix, and the first multiplexer means for multiplexing wavelength bands and having p groups of n inputs each connected to a distinct one of the output switch port of the first switch optical matrix.”

However, the Examiner maintains that Harada teaches these features, citing figure 2 in support. Applicant respectfully disagrees. Harada figure 2 relates to a hierarchical optical cross-connect (H-OPXC) using common wavelength division multiplex (WDM). Applicant submits that Harada does not remedy the deficient teachings of Yamada.

Applicant respectfully submits that Yamada and Harada, alone or combination, fail to teach or suggest all of the features of claim 1. Specifically, claim 1 recites that “a first switching optical matrix for switching wavelength bands”, and “a second switching optical matrix for switching wavelengths”. The “second stage” comprises “second demultiplexer means for demultiplexing wavelengths and having a plurality of inputs and a plurality of outputs, each input being connected to a distinct one of output redirection ports of the first switching optical matrix”. Accordingly, the “first stage” and the “second stage” are connected, where the “first stage” switches “wavelength bands” and the “second stage” switches “wavelengths”. Yamada

does not disclose a stage “for switching wavelength bands” connected to “a stage for connecting wavelengths”. Rather, Yamada, in both the 1st and 5th embodiments, discloses switching by wavelength groups and then eventually by wavelengths.

Therefore, Applicant respectfully requests the withdrawal of the rejection and earnestly solicits the allowance of claim 1.

Regarding claim 3, The Examiner cites column 10, lines 31-64 of Yamada for allegedly disclosing the features described in claim 3. However, Applicant respectfully submits that Yamada fails to teach or suggest “inter-input-matrix communication ports and at least one inter-output-matrix communications ports”. As explained on page 5 of the specification, “inter-input-matrix” and “inter-output-matrix” communications ports convert one more wavelengths of a band to another band, and therefore groom the information between bands, for example, to fill a partially-unoccupied band. These ports are distinct from the input and output switch ports of the switching optical matrices. The Examiner merely relies on the same portions of Yamada cited as disclosing the first and second *switching* stages of claim 1.

Thus, Applicant respectfully requests the withdrawal of the rejection and earnestly solicits the allowance of claim 3.

Regarding claim 4 recites, in part, “intermatrix switching means for coupling all of said inter-input-matrix communications ports to all of said inter-output-matrix communications ports.” The Examiner cites the same switches relied upon as corresponding to the first and second switching means of claim 1. As is explained on page 5 of the specification of the present invention, the intermatrix switching means is capable of routing signals separately from the first

and second *switching* stage, however, the Examiner attempts to rely on the same features of Yamada as teaching both the intermatrix switching means and the switching stages. Applicant respectfully submits that the elements are clearly distinct.

Thus Applicant respectfully requests the withdrawal of the rejection and earnestly solicits the allowance of claim 4.

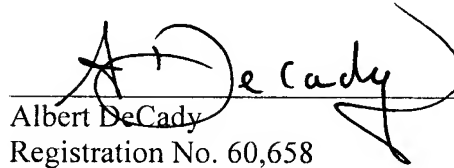
Regarding claims 2, 6-8 are patentable at least by virtue of their dependency on claim 1 and for analogous reasons presented above.

Regarding claim 5 and 9, Applicant respectfully submits that Wang fails to compensate for the deficiencies of Yamada and Harada, and therefore respectfully requests that the withdraw of the rejection.

Regarding claim 10, Applicant respectfully submits that Iannone fails to compensate for the deficiencies of Yamada and Harada, and therefore respectfully requests that the withdraw of the rejection of the claims.

Thus, Applicant respectfully requests the withdrawal of the final Office Action and earnestly solicits the allowance of all of the claims.

Respectfully submitted,


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